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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/423,454      | 11/08/1999  | ROBERT KUTKA         | P99.2301            | 6761             |

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| EXAMINER |
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WONG, ALLEN C

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| ART UNIT | PAPER NUMBER |
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2613

DATE MAILED: 02/02/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/423,454

Applicant(s)

KUTKA ET AL.

Examiner

Allen Wong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 27-52 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 27-52 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/1/03 has been entered.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 27, 28, 43 and 44 have been fully read and considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 27-29, 35-40, 42-44, 46-50 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pullen (5,867,221) in view of Atkins (6,075,926).

Regarding claim 28, Pullen discloses a method for encoding and decoding a digitized image having picture elements, said method comprising the steps of:

grouping all except at least one picture at least one picture elements of said digitized image into a number of image segments in a first arrangement, said at least

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one ungrouped picture element being from at least one area of said image located between image segments (note fig.1, elements 16, 12, 28, 30 and 32 comprise a first arrangement, where fig.1, element 12 is a compression processor unit having present frame memory 16 and previous frame memory 30, a local decompressor 28 and vector quantization table 32, where at least one pixilated image area is located and obtained by gathering only the pixilated data difference between the current frame and the previous frame and preparing the transmission of the pixilated data difference, and the unchanged pixilated data is not sent for conserving bandwidth; col.11, ln.53 to col.12, ln.28);

encoding said image in said first arrangement by only encoding said picture elements being grouped into an image segment (fig.1, element 12);

transmitting said encoded image segments from said first arrangement to a second arrangement (fig.1, element 14 is a transmitter, where the interconnected elements 18, 20, 32 and 24 comprise a second arrangement);

decoding said transmitted image segments in said second arrangement (fig.1, element 20);

inserting new picture elements corresponding to said non-encoded picture elements of said encoded image in said second arrangement in an area between said decoded image segments (col.8, lines 43-48; fig.1, note image data is decoded at element 20 into map codes and then utilized for inserting new picture elements to the non-encoded picture elements);

interpolating said area between said image segments in said second arrangement (fig.1, note elements 20, 24 and 32 function to interpolate the area between the image segments, where 32 is the vector quantization tables); and

allocating encoding information resulting from said interpolating to said new picture elements (fig.1, note elements 20, 24 and 32 function to interpolate the area between the image segments, where 32 is the vector quantization tables and element is the regenerated frame buffer, thus the encoding information is allocated).

Although Pullen does not specifically disclose the limitation based on a mathematically defined region of said digitized image derived solely from said digitized image itself. However, Atkins teaches the number of image segments based on a mathematically defined region of the digitized image is derived solely from the digitized image itself (fig.3 illustrates the image 305, based on a mathematically defined region, is subjected to mathematical filtering and interpolation processes that is confined within the digitized image itself and fig.8 discloses a weighted filter process alternative of the filter application shown in fig.3 where the high resolution digital image is derived from the same low resolution digital image). Therefore, it would have been obvious to one of ordinary skill in the art to take the teachings of Pullen and Atkins, as a whole, for implementing Atkins system of improving data image resolution with Pullen's image compression/decompression system so as to overall improve image quality at the receiving end in order to display high quality images even if the image data transmitted was originally from low quality image data (col.6, ln.7-10).

Note claims 27, 43-44 and 46 have similar corresponding elements.

Regarding claim 29, Pullen discloses image filtering (col.6, lines 55-58).

Regarding claims 35-36, Pullen discloses the image segments are image blocks (see figs.3-5 and 8).

Regarding claims 37-39 and 47-49, Pullen discloses the use of filters for interpolation (col.20, ln.54 to col.21, ln.19).

Regarding claims 40 and 50, Pullen discloses the H.263 video encoding standard (col.1, lines 39-43, Pullen discloses the MPEG encoding).

1. Regarding claims 42 and 52, Pullen discloses the use of motion compensation (col.8, lines 48-55).
2. Claims 30-34 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pullen (5,867,221), Atkins (6,075,926) and further in view of Girod (5,854,858).

Regarding claims 30-34 and 45, Pullen discloses image filtering prior to encoding (col.6, lines 55-58). Pullen does not specifically disclose the low-pass filtering of images. However, Girod teaches the use of low-pass image filtering (fig.4, element 403). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Pullen and Girod for applying the use of a low-pass image filter to trim out discrepancies so as to efficiently encode images while maintaining accuracy. Doing so would yield smooth images at the display output.

3. Claims 41 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pullen (5,867,221), Atkins (6,075,926) and further in view of Kwan (5,910,827).

With regards to claims 41 and 51, Pullen discloses the H.263 video encoding standard (col.1, lines 39-43, Pullen discloses the MPEG encoding). Pullen does not disclose the

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use of H.245 standard. However, Kwan teaches the use of H.245 standard along with H.263 standard (fig.2, element 56). Therefore, it would have been obvious to one of ordinary skill in the art to take the teachings of Pullen and Kwan as a whole for employing the H.245 standard so as to accurately encode images in an efficient manner, while maintaining with today's highly complex video encoding/decoding standards.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen Wong whose telephone number is (703) 306-5978. The examiner can normally be reached on Mondays to Thursdays from 8am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Kelley can be reached on (703) 305-4856. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

  
Allen Wong  
Examiner  
Art Unit 2613

AW  
1/23/04